



6F7

RCA-6F7 TRIODE-PENTODE

Heater *	Coated Uni-potential Cathode	
Voltage	6.3	a-c or d-c volts
Current	0.3	amp.
Direct Interelectrode Capacitances:		
Triode Unit:		
Grid to Plate	2.0	μuf
Grid to Cathode	2.5	μuf
Plate to Cathode	3.0	μuf
Pentode Unit:		
Grid to Plate	0.008 max. [⊙]	μuf
Input	3.2	μuf
Output	12.5	μuf
Overall Length		4-9/32" to 4-17/32"
Maximum Diameter		1-9/16"
Bulb		ST-12
Cap		Small Metal
Base		Small 7-Pin ^Δ
Pin 1-Heater	(2)	Pin 5-Triode Grid
Pin 2-Pentode Plate	(4)	Pin 6-Cathode
Pin 3-Pentode Screen	(5)	Pin 7-Heater
Pin 4-Triode Plate	(7)	Cap -Pentode Grid

BOTTOM VIEW

AMPLIFIER SERVICE

	<u>Triode Unit</u>	<u>Pentode Unit</u>	
Plate Voltage	100 max.	100 250 max. volts	
Screen Voltage	-	100 max. volts	
Grid Voltage	-3	-3 min. volts	
Amp. Fact.	8	300 900	
Plate Res.	16000	290000 850000	ohms
Mut. Cond.	500	1050 1100	μmhos
Mut. Cond. at -35 volts bias	-	9 10	μmhos
Plate Cur.	3.5	6.3 6.5	ma.
Screen Cur.	-	1.6 1.5	ma.

CONVERTER SERVICE

	<u>Triode Unit</u>	<u>Pentode Unit</u>	
Plate Voltage	100 max.	250 max. volts	
Screen Voltage	-	100 max. volts	
Grid Voltage	##	-3 min.* volts	
Oscillator Plate Cur. (av.)	4 max.	-	ma.
Typical Operation:			
Plate	100 [⊙]	250	volts
Screen	-	100 [⊙]	volts
Grid Bias	##	-10 [⊙]	volts
Plate Resistance	-	2	megohms
Conversion Conductance	-	300	μmhos
D-c Plate Current	2.4	2.8	ma.
D-c Grid Current	0.15	0	ma.
Screen Current	-	0.6	ma.
Oscillator Peak Voltage Input	-	7	volts

Usually obtained by means of a grid leak.

****** Grid bias should be at least .3 volts greater than the peak oscillator voltage applied to the pentode grid.

⊙ May be obtained from 250-volt source through 60000-ohm dropping resistor.

⊙⊙ Obtained by means of 1700-ohm self-biasing (cathode) resistor.

***** In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.

Δ Requires different socket than medium 7-pin base.

⊙ With shield-can.

SEPT. 1, 1935

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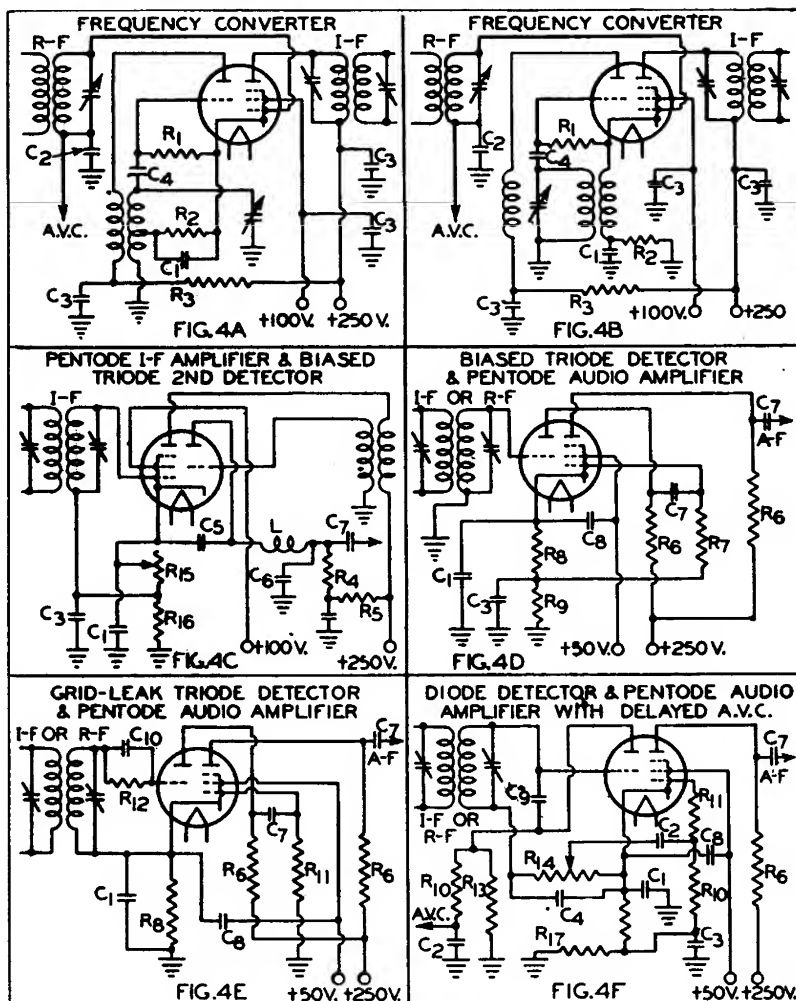
DATA

6F7



RCA-6F7

TYPICAL CIRCUITS



APPROXIMATE VALUES

$C_1 = 5 \mu f$
 $C_2 = 0.05 \mu f$
 $C_3 = 0.1 \mu f$
 $C_4 = 0.0002 \mu f$
 $C_5 = 0.0024 \mu f$
 $C_6 = 0.00016 \mu f$
 $C_7 = 0.01 \mu f$
 $C_8 = 0.5 \mu f$
 $C_9 = 0.0005 \text{ TO } 0.001 \mu f$
 $C_{10} = 0.00025 \mu f$
 $L = \text{I-F CHOKE COIL}$
 $R_1 = \text{OSCILLATOR GRID LEAK-0.1 MEGOHM}$

$R_2 = \text{PENTODE SELF-BIASING RESISTOR-1500 OHMS}$
 $R_3 = \text{VOLTAGE DROPPING RESISTOR-50000 OHMS}$
 $R_4 = \text{PLATE COUPLING RESISTOR-170000 OHMS}$
 $R_5 = \text{FILTER RESISTOR-30000 OHMS}$
 $R_6 = \text{PLATE COUPLING RESISTOR-300000 OHMS}$
 $R_7 = \text{PENTODE GRID LEAK-0.5 MEGOHM}$
 $R_8 = \text{PENTODE SELF-BIASING RESISTOR-5000 OHMS}$
 $R_9 = 10000 \text{ OHMS. } R_9 + R_8 = \text{TRIODE BIASING RESISTOR}$
 $R_{10} = \text{FILTER RESISTOR-1.0 MEGOHM}$
 $R_{11} = \text{GRID RESISTOR-500000 OHMS}$
 $R_{12} = \text{TRIODE GRID LEAK-1.0 MEGOHM}$
 $R_{13} = \text{A.V.C. DIODE LOAD-1.0 MEGOHM}$
 $R_{14} = \text{A-F DIODE-LOAD POTENTIOMETER-0.5 MEGOHM}$
 $R_{15} = \text{PENTODE SELF-BIASING RES. 4000 OHMS VAR.}$
 $R_{16} = 1500 \text{ OHMS. } R_{16} + R_{15} = \text{TRIODE BIASING RESISTOR}$

The license extended to the purchaser of tubes appears in the License Notice accompanying them. Information contained herein is furnished without assuming any obligations.

SEPT. 1, 1935

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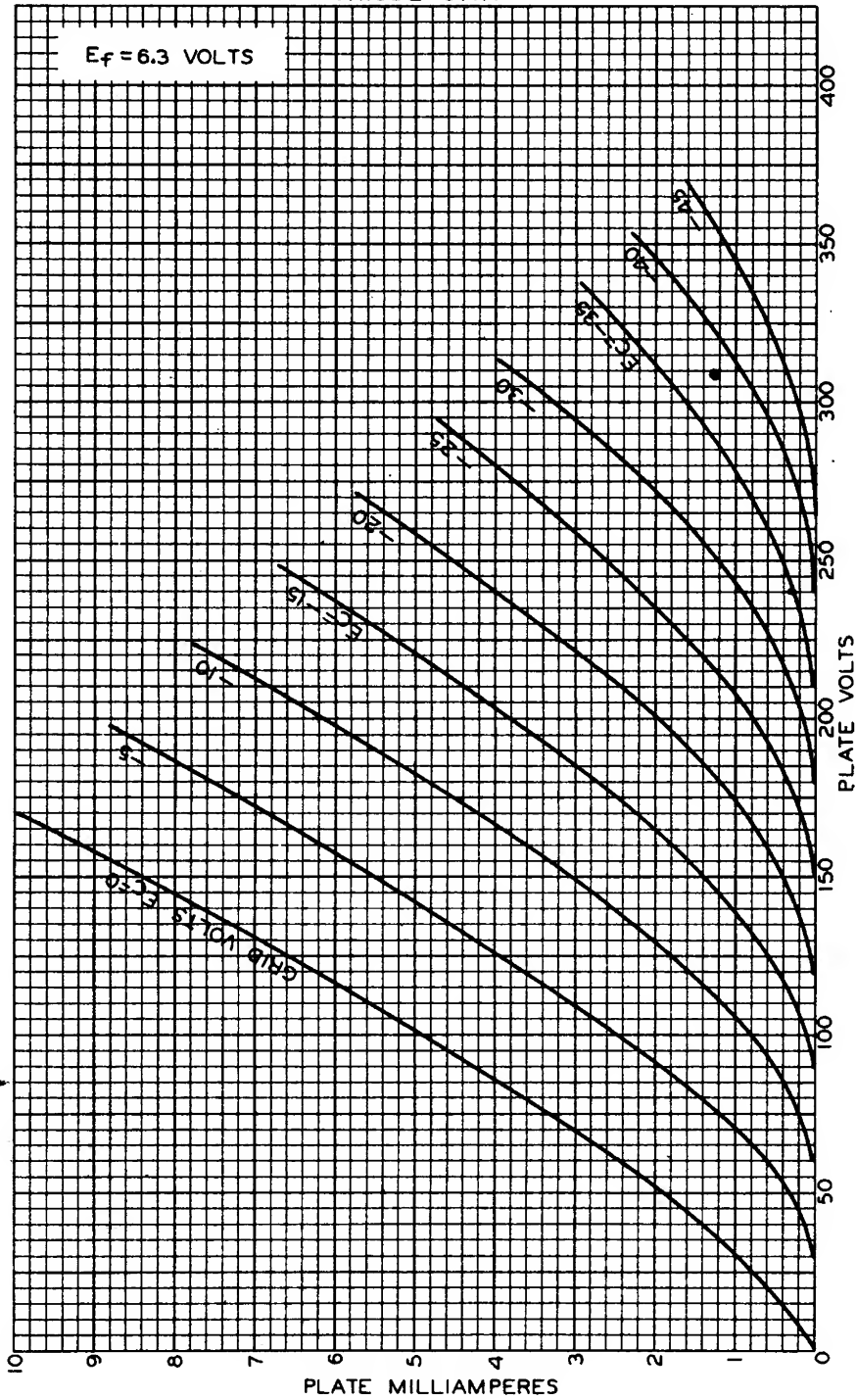
CE-4302

RCA Radiotron
RCA-6F7

Cunningham
RADIO TUBES
C-6F7

6F7

AVERAGE PLATE CHARACTERISTICS
TRIODE UNIT



DEC. 5, 1933

925-5426

6F7



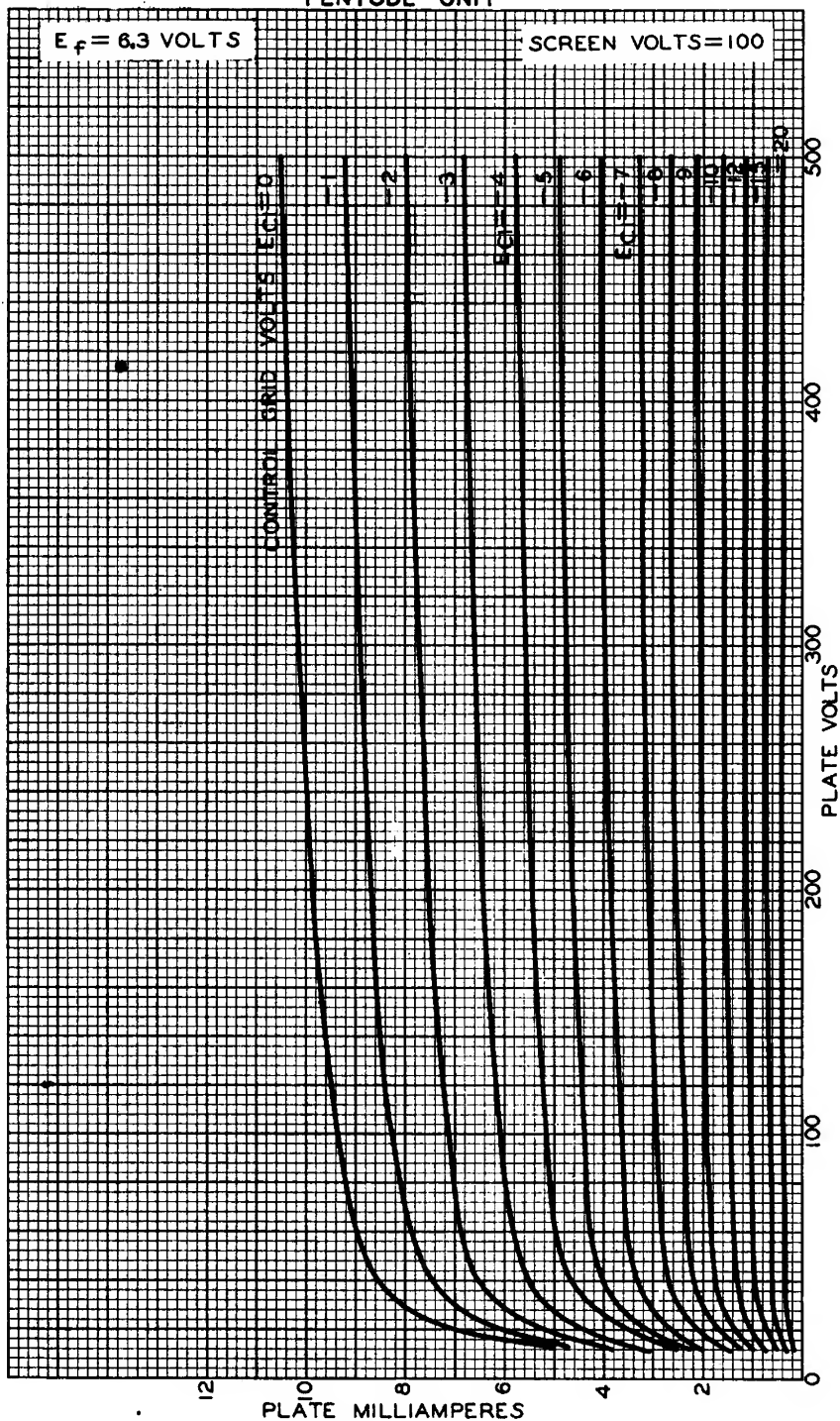
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Cunningham
RADIO TUBES

C-6F7

AVERAGE PLATE CHARACTERISTICS
PENTODE UNIT



AUG. 18, 1933

92S-5360